

# Work Order ID 83961

Monday, April 30, 2012 10:29:02 AM

**\*83961\***

Ship May 14<sup>th</sup> Page 1

Item ID: D4292-1 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Fitting  
 Start Date: 5/1/2012 Start Qty: 8.00 **\*8\*** Cust Item ID:  
 Required Date: 5/11/2012 Req'd Qty: 8.00 **\*8\*** Customer:  
 Reference:

Approvals: Process Plan: mf Date: 2-04-30 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4292	C								

100

**\*100\***

Bandsaw

Jeaspa Bandsaw

BAND SAW

Memo

Cut Blank to 6.250"

Batch:

\*\*\*\*GRAIN DIRECTION MUST BE ALONG 4.00"\*\*\*\*\*

cut material at meter

0.00

0.00

P/O: 16927

CL 12/05/08 (8)

110

**\*110\***

HAAS I

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

1-Machine per folio FB002

DWG REV: C

FOLIO REV: AB

0.00

0.00

24 P-5-11

10

FK 12/05/12

2- deburr rough edges

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**\*83961\***

Page 2

**\*N900040100\***

Setup Start \*NS1\*

Stop \*NS2\*

**Cust Item ID:**

**\*8\***

**\*8\***

**Customer:**

**Reference:**

Run Start \*NR1\*

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Stop \*NR2\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

**Insp.**  
**Stamp**

0.00

**\*120\***

0.00

QC

## Memo

## Quality Control

29, 12-5-11  
FK 12/05/12

10

0.00

\*121\*

0.00

Mill Conv

## Memo

### Conventional Milling Machine

DRILL & TAP FOR HELICOIL AS PER DWG

12/05/14

10

0.00

\*122\*

0.00

QC

## Memo

## Quality Control

2nd 12/05/14

10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Page 3

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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start \*NR1\*  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check  Memo	0.00 0.00		SA 12/5/14		10	Ø		
140 *140* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1  Memo	0.00 0.00				10	7/6	12-5-15	
145 *145* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum  Memo MASK THREADED HOLE	0.00 0.00				10X	Ø		M-L 12/05/15

m 12/11/34

Start Time: 11:40  
 Temp: 320°F  
 Finish Time: 12:10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**\*N900040100\***

Setup Start \*NS1\*

Stop \*NS2\*

**Start Date:** 5/1/2012      **Start Qty:** 8.00      **\*8\***

**Cust Item ID:**

**Required Date:** 5/11/2012      **Req'd Qty:** 8.00      **\*Q\***

**Customer:**

**Reference:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

### Operation Description

### Set Up/ Run Hours

## Tool ID

**Tool #**

## Plan Code

**Accept Qty**

Reject  
Qty

## Reject Number

**Insp.  
Stamp**

QC3- Inspect Part Finish

0.00

**\*150\***

QC

## Memo

0.00

## Quality Control

151

0.00

**\*151\***

### Small Fab

## Memo

0.00

## Small Fab

## INSTAL HELICOIL

152

QC5- Inspect part completeness to step on W/O

0.00

**\*152\***

QC

## Memo

0.00

## Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**\*8\***

**\*8\***

**Customer:**

**Reference:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

### Operation Description

### Set Up/ Run Hours

**Tool ID**

Tool #

**Plan  
Code**

**Accept  
Qty**

Reject  
Qty

### Reject Number

**Insp.**  
**Stamp**

Identify as per dwg & Stock Location: 470

0.00

**\*180\***

### Packaging

## Memo

0.00

## Packaging

QC21- Final Inspection - Work Order Release

000

\*190\*

QC

## Memo

0.00

## Quality Control

10. relief

12/5/16 *[Signature]*

mf  
12-05-15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Monday, April 30, 2012 10:29:01 AM

Page 1

Work Order ID: 83961

Parent Item: D4292-1

Parent Item Name: Fitting

Start Date: 5/1/2012

Required Date: 5/11/2012

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A NEW ISSUE 10-11-14 JLM VERIFIED BY:DD  
02-15 JLM VERIFIED BY:DD

IPP REV B: AS PER REV B 11-

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T73B4.000x4.000 7075-T73 Bar 4.0 x 4.0		Purchased	No			100	f	11.9215	0.52	4.3789474			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				MAT001		1.4055							
				118201		1.4055							
				MAT005		10.516							
				116153		0.75							
				116867		0.041							
				121246		9.725							
MS21209F1-10 HELI COIL		Purchased	No				Each	62.0000					
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST304		62							
				116977		62							

RR 12.5.11

M116930 (x3)  
1.563'

3.125'

8  
4.688  
105/15  
10

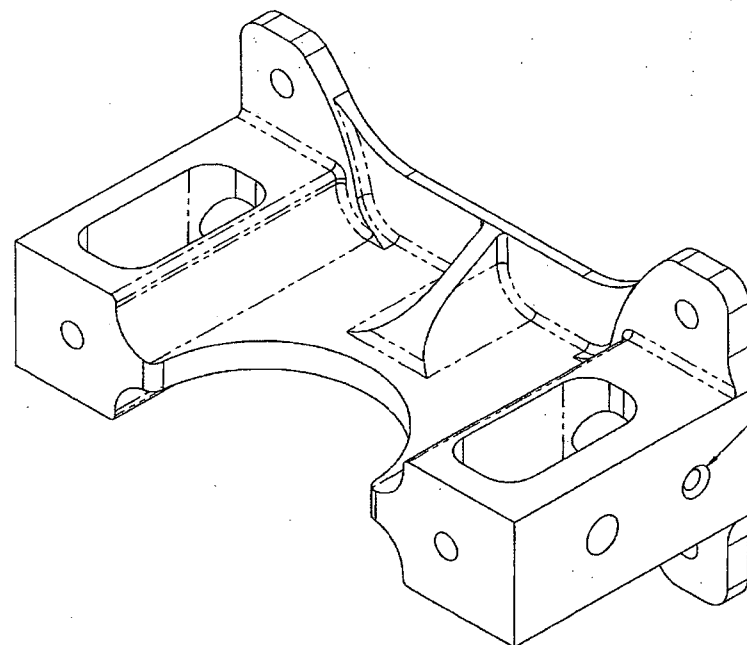
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



MS21209F1-10 HELICAL COIL, 1X  
REF

GRAIN  
DIRECTION

# 83961

RELEASED  
2011-02-01

**D4292-1 FITTING**

C	1.064 WAS 1.235 (C1-2), Ø0.266 WAS Ø0.323 (B3-2), ADD HELICAL COIL (D1-2)	CP	10.12.23
B	0.800 WAS 0.78 (C6-2), 0.825 WAS 0.81 (C4-2)	CP	10.11.30
A	NEW ISSUE	CP	10.11.09
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.12.23		

**NOTES:**

- 1) MATERIAL: 7075-T73/-T7351/-T73511 BAR  
PER AMS-QQ-A-200/11 OR AMS-QQ-A-225/9 (AMS 4124) OR AMS-QQ-A-250/12 (AMS 4078)  
REF DART SPEC. M7075T73B
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: P/N "D4292-1" AND B/N PER DART QSI 044 6.1
- 7) WEIGHT: 1.02 lbs

<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. <b>D4292</b>	REV. C SHEET 1 OF 3
TITLE <b>FITTING (206L/407 FWD)</b>	SCALE NTS
COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR DISCLOSED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

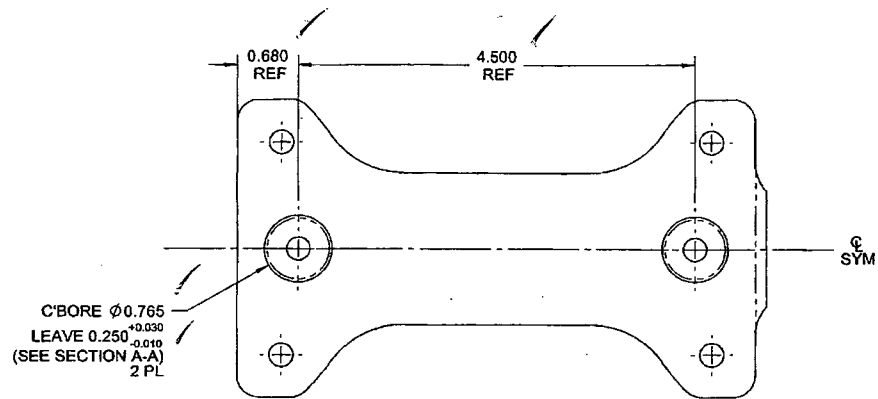
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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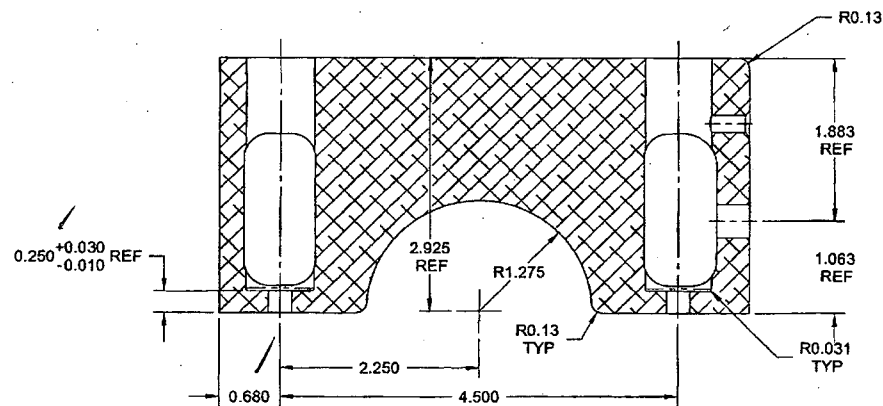
**NOTE:** Date & initial all entries



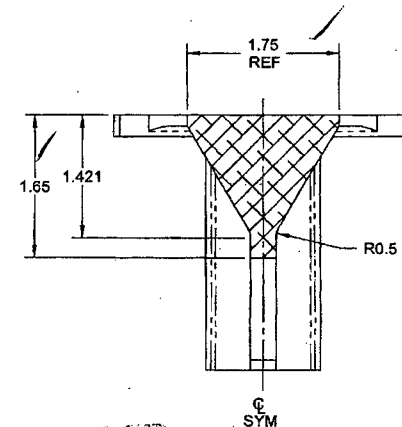
8 7 6 5 4 3 2 1



**VIEW C-C** D3-2



**SECTION A-A** A3-2



**SECTION B-B** C4-2

RELEASED  
 2011-02-01

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. <b>D4292</b>	REV. C
MFG. APPR.			SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		<b>FITTING (206L/407 FWD)</b>	NTS
DATE	<b>10.12.23</b>	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

8 7 6 5 4 3 2 1

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<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 83961
<b>Description:</b> Fitting		<b>Part Number:</b> D4292-1
<b>Inspection Dwg:</b> D4292	<b>Rev:</b> C	<b>Page 1 of 2</b>

### FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
R0.063	+/-0.010	.063	/	/	rad gauge	
0.250	+0.030/-0.010	.264	/	/	RQ-02	Vern
0.125	+0.030/-0.010	.137	/	/	"	"
2.95	+/-0.030	2.955	/	/	"	"
0.275	+/-0.010	.277	/	/	"	"
0.800	+/-0.010	.798	/	/	"	"
0.825	+/-0.010	.824	/	/	"	"
0.375	+/-0.010	.375	/	/	"	"
0.31	+/-0.030	.311	/	/	"	"
0.88	+/-0.030	.885	/	/	"	"
0.663	+/-0.010	.663	/	/		
Ø0.381	+0.000/-0.001	.381	/	/		
1.125	+/-0.010	1.128	/	/		
1.063	+/-0.010	1.064	/	/		
3.44	+/-0.030	3.440	/	/	RQ-02	Vern -
2.450	+/-0.010	2.450	/	/	"	"
1.325	+/-0.010	1.325	/	/	"	"
0.300	+/-0.010	.300	/	/	"	"
1.200	+/-0.010	1.200	/	/	"	"
2.84	+/-0.030	2.84	/	/	"	"
0.19	+/-0.030	.19	/	/	"	"
5.86	+/-0.030	5.865	/	/	"	"
5.99	+/-0.030	5.993	/	/	"	"
Ø0.272	+0.006/-0.001	.272	/	/	"	"
Ø0.266	+0.006/-0.001	.266	/	/	"	"
1.75	+/-0.030	1.755	/	/	"	"
R0.25	+/-0.030	.25	/	/	rad gauge	
R0.06	+/-0.030	.06	/	/	"	
4.875	+/-0.010	4.875	/	/	RQ-02	Vern
0.493	+/-0.010	.493	/	/	"	"
C-bore Ø0.765	+/-0.010	.763	/	/	"	"
0.250	+0.030/-0.010	.252	/	/	"	"
0.680	+/-0.010	.680	/	/	"	"
2.250	+/-0.010	2.250	/	/	"	"
4.500	+/-0.010	4.500	/	/	"	"
R1.275	+/-0.010	1.275	/	/	rad gauge	
R0.031	+/-0.010	.031	/	/	"	

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